

TRACHEOSTOMY CARE CONTAINER SYSTEM

BACKGROUND

This invention relates to providing a system to assist users in more conveniently and efficiently providing tracheostomy (also called tracheotomy or trach) care. People with a tracheostomy need to have the skin around the stoma cleaned to reduce the chance for infection and to keep the skin under the tracheostomy tube and ties healthy. Often, people with a tracheostomy need to use a tracheostomy suction catheter multiple times a day to have mucus suctioned from their lungs and trachea. The term "catheter" refers to such a tracheostomy suction catheter.

Although it is typically safer to open a sterile package and use a new catheter each time suctioning is performed, catheters are relatively expensive. It would be much more cost effective to clean and store catheters so that they can be used several times. However, in the past there has not been a convenient and efficient way to store used catheters in a clean environment, especially adjacent the other materials and instruments used in performing trach care. For example, placing a catheter on a table (or other unclean surface) can contaminate the catheter, thereby placing the trach patient at risk for infection if the catheter is used again.

In addition, typically, trach care involves using two liquids: first, a cleaning solution (typically hydrogen peroxide diluted with water); and second, pure water. Typically, in preparation for performing trach care, the liquids are poured into separate disposable cups: one for cleaning solution; and the other for pure water. In the past, mistakes in trach care have been made due to confusion over mistaking the cleaning solution for the water, and vice-versa, since both liquids appear similar. Further, in the past it has been easy to accidentally knock over one of the disposable cups (spilling the contents) in the process of performing trach care.

OBJECTS AND FEATURES OF THE INVENTION

A primary object and feature of the present invention is to provide a system to assist in organizing and managing trach care materials.

It is a further object and feature of the present invention to provide such a system which can be used to conveniently transport trach care materials. It is a further object and feature of the present invention to provide such a system which can be used to conveniently hold trach care materials in a location near to where they will be used.

It is a further object and feature of the present invention to provide such a system which can be used to store a used

suction catheter in a clean environment so that the catheter can be used again.

It is a further object and feature of the present invention to provide such a system which allows a user to easily distinguish between cleaning solution and water. It is a further object and feature of the present invention to provide such a system which holds the cleaning solution and water so that they are not easily spilled.

A further primary object and feature of the present invention is to provide such a system that is efficient, inexpensive, and handy. Other objects and features of this invention will become apparent with reference to the following descriptions.

SUMMARY OF THE INVENTION

In accordance with a preferred embodiment hereof, this invention provides a tracheostomy care container system comprising, in combination: at least one suction catheter kit container adapted to contain a plurality of suction catheter kits; and at least one used suction catheter container adapted to contain a used suction catheter within a substantially clean environment so that such used suction catheter can be used again. Moreover, it provides such a tracheostomy care container system further comprising at least one suction catheter holder

to hold such used suction catheter within such at least one used suction catheter container. Additionally, it provides such a tracheostomy care container system wherein such at least one suction catheter holder comprises hook-and-loop fastening material. Also, it provides such a tracheostomy care container system further comprising: at least one tracheostomy care item container adapted to contain at least one tracheostomy care item; wherein such at least one tracheostomy care item is selected from the group consisting of gauze, a cotton swab, a hemostat, a saline vial, a tracheostomy tube holder, a tracheostomy tube, medical tape, lubricant jelly.

In addition, it provides such a tracheostomy care container system further comprising: at least one gauze pad, at least one cotton swab, at least one tracheostomy tube holder, at least one tracheostomy tube, a reservoir for water, and a reservoir for cleaning solution. And, it provides such a tracheostomy care container system wherein such at least one used suction catheter container is adapted to nest within such at least one suction catheter kit container. Further, it provides such a tracheostomy care container system further comprising at least one carrying assistor selected from the group consisting of a shoulder strap and a handle. Even further, it provides such a tracheostomy care container system further comprising at least

one attacher structured and arranged so that the tracheostomy care container system can be attached to hang from furniture. Moreover, it provides such a tracheostomy care container system further comprising: at least one water holder adapted to hold at least one water container; and at least one cleaning solution holder adapted to hold at least one cleaning solution container. Additionally, it provides such a tracheostomy care container system further comprising at least one tracheostomy care item container adapted to contain at least one tracheostomy care item, wherein such at least one tracheostomy care item is selected from the group consisting of gauze, a cotton swab, a hemostat, a saline vial, a tracheostomy tube holder, an tracheostomy tube, medical tape, and lubricant jelly.

Also, it provides such a tracheostomy care container system wherein such at least one suction catheter kit container comprises at least one dispensing slot adapted to dispense suction catheter kits. In addition, it provides such a tracheostomy care container system wherein such suction catheter kit container comprises: a suction catheter kit container length, wherein such suction catheter kit container length is about 10 inches; and a suction catheter kit container width, wherein such suction catheter kit container width is about 5-1/2 inches. And, it provides such a tracheostomy care container

system further comprising: at least one cotton swab container adapted to contain at least one cotton swab, wherein such at least one cotton swab container comprises a reclosable lid; at least one gauze pad container adapted to contain at least one gauze pad; and at least one hydrogen peroxide container adapted to contain at least one bottle of hydrogen peroxide. Further, it provides such a tracheostomy care container system further comprising: at least one hemostat container adapted to contain at least one hemostat; at least one tracheostomy tube holder container adapted to contain at least one tracheostomy tube holder; and at least one tracheostomy tube container adapted to contain at least one tracheostomy tube.

In accordance with another preferred embodiment hereof, this invention provides a tracheostomy care container system comprising, in combination: at least one suction catheter kit container adapted to contain a plurality of suction catheter kits; wherein such suction catheter kit container comprises a suction catheter kit container length, wherein such suction catheter kit container length is about as long as a standard suction catheter kit, a suction catheter kit container width, wherein such suction catheter kit container width is about as wide as a standard suction catheter kit; and at least one carrying assistor selected from the group consisting of, a

shoulder strap, and a handle. Even further, it provides such a tracheostomy care container system wherein such at least one carrying assistor is structured and arranged to be detachable. Moreover, it provides such a tracheostomy care container system wherein such suction catheter kit container length is about 10 inches, and wherein such suction catheter kit container width is about 5-1/2 inches.

In accordance with another preferred embodiment hereof, this invention provides a tracheostomy care container system, which can be attached to furniture, comprising, in combination: at least one suction catheter kit container adapted to contain a plurality of suction catheter kits; and at least one attacher structured and arranged so that the tracheostomy care container system can be attached to hang from the furniture. Additionally, it provides such a tracheostomy care container system wherein such at least one attacher comprises at least one lip. Also, it provides such a tracheostomy care container system wherein such at least one lip is adapted for attachment to the upper rail of a crib.

In accordance with another preferred embodiment hereof, this invention provides a tracheostomy care container system comprising, in combination: at least one suction catheter kit container adapted to contain a plurality of suction catheter

kits; and at least one used suction catheter container adapted to contain a used suction catheter within a substantially sterile environment so that such used suction catheter can be used again; wherein such at least one suction catheter kit container comprises at least one dispensing slot adapted to dispense suction catheter kits. In addition, it provides such a tracheostomy care container system wherein such at least one used suction catheter container is adapted to nest within such at least one suction catheter kit container.

In accordance with another preferred embodiment hereof, this invention provides a tracheostomy care container system comprising, in combination: at least one suction catheter kit container adapted to contain at least one suction catheter kit; at least one water holder adapted to hold at least one water container; and at least one cleaning solution holder adapted to hold at least one cleaning solution container. And, it provides such a tracheostomy care container system wherein such at least one water holder comprises at least one water container; and wherein such at least one cleaning solution holder comprises at least one cleaning solution container. Further, it provides such a tracheostomy care container system wherein such at least one water container comprises at least one cup; and wherein such at least one cleaning solution container comprises at least one

cup. Even further, it provides such a tracheostomy care container system wherein such at least one water holder is adapted to removably hold at least one disposable cup; and wherein such at least one cleaning solution holder is adapted to removably hold at least one disposable cup. Even further, it provides such a tracheostomy care container system wherein such at least one water holder comprises water identification indicia; and wherein such at least one cleaning solution holder comprises cleaning solution identification indicia. Even further, it provides such a tracheostomy care container system wherein such water identification indicia comprise at least one different color than such cleaning solution identification indicia. Even further, it provides such a tracheostomy care container system wherein such water identification indicia comprises primarily the color blue. Even further, it provides such a tracheostomy care container system wherein such cleaning solution identification indicia comprises primarily the color red. Even further, it provides such a tracheostomy care container system wherein such water identification indicia comprise at least one word.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 shows a perspective view of a tracheostomy care container system, along with some trach care items, according to

a preferred embodiment of the present invention.

FIG. 2 shows a top view of the tracheostomy care container system of FIG 1.

FIG. 3 shows a perspective view of the tracheostomy care container system of FIG 1.

FIG. 4 shows a perspective view of the tracheostomy care container system (without trach care items) of FIG. 1.

FIG. 5 shows a collection of trach care items which comprise a tracheostomy care container system according to the illustrated preferred embodiment of the present invention.

FIG. 6 shows a partial cutaway of the tracheostomy care container system of FIG. 1, showing a dispensing slot for clean sealed containers holding suction catheters.

DETAILED DESCRIPTION OF THE BEST MODE

AND PREFERRED EMBODIMENTS OF THE INVENTION

FIG. 1 shows a perspective view of a tracheostomy care container system **100** according to a preferred embodiment of the present invention. Preferably, tracheostomy care container system **100** comprises at least one carrying assistor to help a user carry tracheostomy care container system **100**, preferably a strap **116**, as shown. Preferably, strap **116** has an adjustable length, preferably so that strap **116** can be used as a shoulder strap and/or handle strap. Preferably, strap **116** is removably

attached with attachers **118**, which are attached to attacher receptacles **120** (see also FIG. 4). Preferably, attachers **118** operate with a quick release mechanism. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering issues such as intended use, market demand, production cost, etc., other carrying assistor arrangements may suffice, such as, for example, omitting strap **116**, fixedly attaching strap **116**, using other types of strap attachers **118** such as snaps, buckles, clasps, using another type of flexible or rigid handle instead of or in addition to strap, etc.

Preferably, tracheostomy care container system **100** comprises cleaning solution container holder **106** to removably hold cleaning solution container **316**, as shown. Preferably, cleaning solution container **316** is a disposable plastic or paper cup for holding cleaning solution (preferably hydrogen peroxide solution). Preferably, cleaning solution container holder **106** holds cleaning solution container **316** securely in place so that cleaning solution container **316** won't tip over or spill. Preferably, cleaning solution container holder **106** comprises cleaning solution identification indicia **126**. Preferably, cleaning solution identification indicia **126** comprise colors

and/or patterns to easily distinguish cleaning solution container holder **106** from water container holder **108**. Preferably, cleaning solution identification indicia **126** comprise the color red. Preferably, cleaning solution identification indicia **126** comprise the word "Peroxide" and/or the word "Solution". Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering issues such as intended use, market demand, production cost, etc., other cleaning solution container holder arrangements may suffice, such as, for example, using different colors or words for cleaning solution identification indicia, having cleaning solution container fixed instead of removable, etc.

Preferably, tracheostomy care container system **100** comprises water container holder **108** for removably holding water container **318**, as shown. Preferably water container **318** is a disposable plastic or paper cup. Preferably, water container holder **108** holds water container **318** securely in place so that water container **318** won't tip over or spill. Preferably water container holder **108** comprises water identification indicia **128**. Preferably, water identification indicia **128** comprise at least one color and/or at least one pattern to easily distinguish water container holder **108** from cleaning container holder **106**.

Preferably, water identification indicia **128** comprise primarily the color blue. Preferably, water identification indicia **126** comprise the word "Water". Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering issues such as intended use, market demand, production cost, etc., other water container holder arrangements may suffice, such as, for example, using different colors or words for water identification indicia, having water container fixed instead of removable, etc.

Preferably tracheostomy care container system **100** comprises rigid material, preferably plastic. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering issues such as intended use, market demand, production cost, etc., other materials may suffice, such as, for example, metal, flexible material, fabrics, or combinations of different materials, etc. Preferably, cleanliness of the material used to construct tracheostomy care container system **100** will be easily maintainable.

Reference is now made to FIG. 2 and FIG. 3. FIG. 2 shows a top view of tracheostomy care container system **100**. FIG. 3 shows a perspective view of tracheostomy care container system

100. Preferably, tracheostomy care container system **100** comprises used catheter container **200**. Preferably used catheter container **200** is structured and arranged to store used catheter **300**. Preferably used catheter **300** is placed within clean container **322**, such as, for example, a clean plastic bag (preferably from within the catheter kit package **320** in which the catheter was initially provided). Preferably catheter **300** and clean container **322** are placed within used catheter container **200**. Preferably, used catheter container **200** helps prevent catheter **300** from falling out of clean container **322**. Preferably, used catheter container **200** assists in transporting catheter **300** and clean container **322** together with other trach care materials. Preferably, tracheostomy care container system **100** comprises catheter holder **114** to assist in holding and securing used catheter **300** within used catheter container **200**, as shown. Preferably, catheter holder **114** comprises hook-and-loop fastening material, such as VELCRO (TM), as shown. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering issues such as intended use, market demand, production cost, etc., other catheter container arrangements may suffice, such as, for example, keeping catheter container **200** clean so that catheter **300** can be stored in

catheter container **200** without clean container **322**, using other types of catheter holders such as snaps, elastic, straps, clips, etc.

Preferably, tracheostomy care container system **100** comprises used tracheostomy care item container **202**, as shown. Preferably, tracheostomy care item container **202** comprises gauze pad container adapted to contain gauze pads **312** used for tracheostomy care. Preferably, tracheostomy care item container **202** comprises tracheostomy tube holder container adapted to contain tracheostomy tube holders **314** used for tracheostomy care.

Preferably, tracheostomy care container system **100** comprises hemostat container **204**, as shown. Preferably, hemostat container **204** is adapted to contain a hemostat **306**. Preferably hemostat container **204** is also adapted to contain saline vials **308** and lubricant **324** (see FIG. 5).

Preferably, tracheostomy care container system **100** comprises hydrogen peroxide container **206**, as shown. Preferably, hydrogen peroxide container **206** is adapted to contain a bottle of hydrogen peroxide **304** (which can be diluted to make cleaning solution for tracheostomy care).

Preferably, tracheostomy care container system **100** comprises tracheostomy tube container **208**, as shown.

Preferably, tracheostomy tube container **208** is adapted to contain a tracheostomy tube **302** (which preferably comprises a package to keep tracheostomy tube **302** sterile). Preferably, tracheostomy tube container **208** is also adapted to contain medical tape **326**.

Preferably, tracheostomy care container system **100** comprises cotton swab container **210**. Preferably, cotton swab container **210** is adapted to contain a plurality of cotton swabs **310**, such as, for example, Q-TIPS (TM), as shown. Preferably, cotton swab container **210** comprises lid **212**, as shown in FIG 3.

Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering issues such as user preference, production cost, etc., other container arrangements may suffice, such as, for example, containers adapted to hold different (or other combinations of) trach care materials, etc.

Preferably, tracheostomy care container system **100** comprises attacher **112** structured and arranged so that tracheostomy care container system **100** can be attached to furniture or other structures, as shown. Preferably, attacher **112** comprises a lip, as shown, which can be used to hang tracheostomy care container system **100** from furniture **450** or other objects, such as, for example, by hooking the lip over the

top rail of a crib or bed. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering issues such as intended use, market demand, production cost, etc., other attacher arrangements may suffice, such as, for example, using clips, straps, hooks, etc., instead or in addition to a lip, etc.

FIG. 4 shows an exploded perspective view of an empty (without trach care items) tracheostomy care container system **100**. Preferably, tracheostomy care container system **100** comprises first holder **102** and second holder **104**. Preferably, first holder **102** comprises suction catheter kit container **216** adapted to hold a plurality of suction catheter kits **320** (not shown in FIG. 4, see FIG. 3 and FIG. 6). Preferably, second holder **104** is adapted to nest within first holder **102**. Preferably, a plurality of suction catheter kits **320** are stacked within suction catheter kit container **216** and then second holder **104** is nested within first holder interior **402**, thereby enclosing suction catheter kits **320** within first holder **102**. Preferably, second holder **104** (when nested within first holder **102**) rests upon stopper **404** which prevents suction catheter kits **320** from being crushed by second holder **104**. Preferably, dispensing slot **110** allows suction catheter kits **320** to be

removed from tracheostomy care container system **100** without the need to remove second holder **104** from first holder **102**.

Preferably, second holder **104** has a width **600** which is about the same as the width of a standard suction catheter kit **320**. Preferably, second holder **104** has a length **602** which is about the same as the length of a standard suction catheter kit **320**. Preferably, catheter glove kit container **216** has about the same width **600** and about the same length **602** as second holder **104** (preferably first holder **102** is slightly larger in each dimension to allow nesting, as shown). Preferably, catheter glove kit container **216** has a width of about 5-1/2 inches and a length of about 10 inches. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering issues such as intended use, market demand, production cost, etc., other holder arrangements may suffice, such as, for example, alternate lengths and widths, holders which are not nested, holders which are connected in an alternate fashion (such as stacked), etc.

Preferably second holder **104** comprises grip **214** to assist in removing (un-nesting) second holder **104** from first holder **102**.

FIG. 5 shows a collection of trach care items which

preferably comprise tracheostomy care container system **100**. Preferably, tracheostomy care container system **100** comprises tracheostomy tube **302**, hydrogen peroxide **304**, hemostat **306**, saline vials **308**, cotton swabs **310**, gauze pads **312**, tracheostomy tube holder **314**, cleaning solution container **316**, water container **318**, suction catheter kit **320**, lubricant **324** (such as, for example, KY jelly) and medical tape **320**. Preferably, gauze pads **312** are pre-cut for use in trach care. Preferably, suction catheter kit **320** comprises a suction catheter and glove sealed within clean container **322**. Preferably clean container **322** is sterile.

FIG. 6 shows a partial cutaway of tracheostomy care container system **100**. Preferably, tracheostomy care container system **100** comprises dispensing slot **110**. Preferably, dispensing slot **110** is adapted to allow suction catheter kits **320** to be removed one at a time from suction catheter kit container **216**. Preferably, dispensing slot **110** comprises notch **111** to allow a users fingers greater access in grasping one suction catheter kit **320** (while the remaining suction catheter kits **320** remain within suction catheter kit container **216**).

Tracheostomy care container system **100** allows trach care and/or catheter suctioning trach care to be performed more conveniently and efficiently by assembling the above mentioned

trach care items so they are easily accessible and easily transportable.

The following steps are preferably performed for trach care: Preferably, trach tube holder **314** are cut to the appropriate length. Preferably, cleaning solution (preferably comprising 1/2 portion hydrogen peroxide **304** and 1/2 portion sterile water) is poured into cleaning solution container **316**. Preferably, sterile water is poured into water container **318**. Preferably, the skin around the trach tube is cleaned with cotton swabs **310** soaked in cleaning solution. Preferably, the skin around the trach tube is then rinsed with cotton swabs **310** soaked in sterile water. Preferably, the skin around the trach tube is then dried with gauze **312** or dry cotton swabs **310**. Preferably, trach tube holders **314** are then replaced. Preferably gauze **312** is tucked under the trach tube flush with skin.

The following steps are preferably performed for suctioning trach care: Preferably, remove suction catheter kit **320** from tracheostomy care container system **100**. Preferably, put on glove from suction catheter kit **320** (for sterility). Preferably, connect suction catheter to machine tubing of suction machine (not shown). Preferably, inject sterile saline from saline vial **308** into the trach tube (if needed to loosen

thick or dry mucus which is difficult to suction). Preferably, perform suctioning using catheter from suction catheter kit **320**. Preferably, when finished suctioning, suction cleaning solution from cleaning solution container **316** through catheter (until catheter is clean of mucus, etc.). Preferably, place catheter **300** back within suction catheter kit container **216** and place both within used catheter container **200** for later reuse. Secure catheter **300** in place with catheter holder **114** to prevent catheter from slipping/falling out. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering issues such as condition of the stoma, complications, special medical conditions, etc., other trach care procedures may suffice, such as, for example, using additional (or fewer) trach care items, etc.

Although applicant has described applicant's preferred embodiments of this invention, it will be understood that the broadest scope of this invention includes such modifications as diverse shapes and sizes and materials. Such scope is limited only by the below claims as read in connection with the above specification.

Further, many other advantages of applicant's invention will be apparent to those skilled in the art from the above

descriptions and the below claims.